(19) JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: **01127689 A**

(43) Date of publication of application: **19.05.89**

(51) Int. Cl **C25B 1/16**
C25B 15/08

(21) Application number: **62285951**

(22) Date of filing: **12.11.87**

(71) Applicant: **JAPAN STORAGE BATTERY CO LTD**

(72) Inventor: **FUJITA YUKO**

(54) METHOD FOR CONCENTRATING AQUEOUS SOLUTION OF ALKALI HYDROXIDE

(57) Abstract:

PURPOSE: To produce aq. NaOH soln. having high concn. in a cathode chamber with a small amt. of electric energy, by supplying aq. NaOH soln. having low concn. to the anode and cathode chamber of the diaphragm cell having the anode made of hydrogen occlusion alloy and the cathode made of Ni, by applying an electric current and by circulating the hydrogen generated on the cathode to the anode chamber.

CONSTITUTION: In the electrolytic cell separated into the anodic electrolyte chamber 4 and cathodic electrolyte chamber 5 with a cation-exchange member 3 consisting of sodium perfluorosulfonate, the anode 1 made of hydrogen occlusion alloy is arranged as an anode 1 on the one side of the anodic electrolytic chamber 4 and a hydrogen gas chamber 9 is formed at the rear. As the cathode, sintered alloy of carbonyl Ni powder is used and the upper part of the cathode chamber 5 is connected to the hydrogen gas chamber 9 on the rear of the anode with a pipe having a circulating pump 8. An aq. NaOH having about 30% concn. is supplied to both the chambers 4 and 5, and DC is applied to both the poles. The hydrogen generated on the cathode is sent to the hydrogen gas chamber 9 and adsorbed in the anode, and Na ion infiltrates to the cathode chamber 5 through the diaphragm 3. The aq. NaOH soln. having high concn. of about 50% is taken out from an exhaust port 11 and aq. NaOH soln. having low concn. of about 20% is taken out from an exhaust port 10.